

Lesson Plan

Subject :- **Advanced Construction Techniques & Equipment**

(Code) TH-3

Name of faculty:- *Sadega Khalun*

Semester :- 6TH

Class allotted 60p

Branch :- Civil engg.

Discipline	Semester:-6 TH	From date:- 04/02/25 To date:17/05/25	Teaching Aid
Subject:	No. of days/ per week 4p/w	Theory/ Practical –Topics/Lesson	
Week	Date/Period		

1	04/02/25 to 08/02/25	1 Advanced construction materials 1.1 Fibers and Plastics- Types of fibers- Steel, Carbon, glass fibers, Use of fibers as construction material, properties of Fibers. Types of plastics- PVC, RPVC, HDPE, FRP, GRP etc. Colored plastic sheets. Use of plastic as construction material.	White board & marker
2	10/02/25 to 15/02/25	1.2 Artificial Timbers – Properties and uses of artificial timber. Types of artificial timber available in market, strength of artificial timber.	White board & marker
3	17/02/25 to 22/02/25	1.3 Miscellaneous materials – Properties and uses of acoustics materials, wall claddings, plaster boards, micro-silica, artificial sand, bonding agents, adhesives etc.	White board & marker
4	24/02/25 to 01/03/25	2 Prefabrication 2.1 Introduction, necessity and scope of prefabrication of buildings, history of prefabrication, current uses of prefabrication , types of prefabricated systems, classification of prefabrication, advantages and disadvantages of prefabrication,	White board & marker
5	03/03/25 to 08/03/25	2.2 The theory and process of prefabrication, design principle of prefabricated systems, types of prefabricated elements, modular coordination 2.3 Indian standard recommendation for modular planning.	White board & marker
6	10/03/25 to 13/03/25	3 Earthquake Resistant Construction 3.1 Building Configuration 3.2 Lateral Load resisting structures 3.3 Building characteristics 3.4 Effect of structural irregularities-vertical irregularities, plan configuration problems	White board & marker
7	17/03/25 to 21/03/25	3.5 Safety consideration during additional construction and alteration of existing Buildings. 3.6 Additional strengthening measures in masonry building-corner reinforcement, lintel band, sill band, plinth band, roof band, gable band etc.	White board & marker
8	24/03/25 to 29/03/25	4 Retrofitting of Structures 4.1 Seismic retrofitting of reinforced concrete buildings : 4.2 -Sources of weakness in RC frame building 4.3 -Classification of retrofitting	White board & marker

		techniques and their uses	
9	02/04/25 to 05/04/25	5. Building Services 5.1 Cold Water Distribution in high rise building, lay out of installation 5.2 Hot water supply – General principles for central plants- layout	White board & marker
10	07/04/25 to 12/04/25	5.3 Sanitation –soil and waste water installation in high rise buildings 5.4 Electrical services – i) requirements in high rise buildings ii) Layout of wiring - types of wiring iii) Fuses and their types iv) Earthing and their uses 5.5 Lighting – Requirement of lighting, Measurement of light intensity	White board & marker
11	15/04/25 to 19/04/25	5.6 Ventilation - Methods of ventilation (Natural and artificial Systems of ventilation) problems on ventilation 5.7 Mechanical Services- Lifts, Escalator, Elevators – types and uses.	White board & marker
12	21/04/25 to 26/04/25	6 Construction and earth moving equipments – 6.1 Planning and selection of construction equipments 6.2 Study on earth moving equipments like drag line, tractor, bulldozer, Power shovel	White board & marker & smart board
13	28/04/25 to 03/05/25	6.3 Study and uses of compacting equipments like tamping rollers, Smooth wheel rollers, Pneumatic tired rollers and vibrating compactors 6.4 Owning and operating cost – problems	White board & marker
14	05/05/25 to 10/05/25	7 Soil reinforcing techniques 7.1 Necessity of soil reinforcing. 7.2 Use wire mesh and geo-synthetics	White board & marker
15	13/05/25 to 17/05/25	7.3 Strengthening of embankments, Slope stabilization in cutting and embankments by soil reinforcing techniques.	White board & marker & smart board


 Signature of HOD

Saejya Khetun.
 Signature of faculty